REVISED 08/10

LSUE COURSE SYLLABUS

I.	**Mathematics 1022** **Instructor: Mathematics Faculty**

II.	**Course description from the current LSUE catalog:**

Plane Trigonometry. Lec. 3; Cr. 3.
Trigonometric functions and identities, inverse trigonometric functions, graphs, solving triangles and equations, complex numbers, polar coordinates, parametric equations. Prerequisite: A grade of "C" or better in Mathematics 1021, Math ACT subscore of 25 or higher, or placement by department. Credit will not be given for both this course and MATH 1023.

III.	**Textbook(s) and other required materials:**

Algebra & Trigonometry, 8th Edition by Michael Sullivan. A graphing calculator is required in this course. The TI-83 Plus or TI-84 Plus is recommended.

IV.	**Evaluation/grading (policy and basis; number and frequency of tests and papers; weights of particular tests or papers; etc.):**

Semester grades are largely determined by performance on hour exams and a comprehensive final exam. Other factors that may be used in determining grades are homework, pop quizzes, recitation, and attendance.

V.	**Policies pertaining to attendance, late work, make-up work, etc.:**

Students are expected to attend class on a regular basis. Any hour exam which is missed will be made up on a pro-rata basis on the final examination. For example, if a student misses Exam #2, then those questions on the final examination which pertain to the topics tested on Exam #2, will determine the student's grade on Exam #2. If a student earns 40 of 50 possible points, from those questions only, then the student earns 80% on Exam #2.

VI.	**Course objectives:**

A. Demonstrate an understanding and ability to apply trigonometry (including algebra and/or geometry) for computational problems in theoretical and real-world situations.
B. Demonstrate the ability to interpret, make appropriate judgments, and draw logical conclusions based on quantitative information.

C. Demonstrate the ability to translate problem situations into symbolic representations and use those representations to solve problems.

VII. Major instructional objectives:

When the student completes this course he should be able to:

A. Find the values of circular (and trigonometric) functions and sketch their graphs.
B. Work with the inverse circular (and trigonometric) functions and sketch their graphs.
C. Prove trigonometric identities and solve trigonometric equations.
D. Solve triangles using trigonometry.
E. Be able to use DeMoivres's Theorem.

VIII. Brief summary of course content by major units of instruction:

A. Trigonometric Functions.
    1. Angles and Their Measure.
    2. Right Triangle Trigonometry.
    3. Computing the Values of Trigonometric Functions of Acute Angles.
    4. Trigonometric Functions of General Angles.
    5. Unit Circle Approach; Properties of the Trigonometric Functions.
    6. Graphs of the Sine and Cosine Functions.
    7. Graphs of the Tangent, Cotangent, Cosecant, and Secant Functions
    8. Phase Shift; Sinusoidal Curve Fitting.
B. Analytic Geometry.
    1. The Inverse Sine, Cosine, and Tangent Functions.
    2. The Inverse Trigonometric Functions (Continued).
    3. Trigonometric Identities.
    4. Sum and Difference Formulas.
    5. Double-angle and Half-angle Formulas.
    6. Trigonometric Equations (I).
    7. Trigonometric Equations (II).
C. Applications of Trigonometric Functions
    1. Applications Involving Right Triangles.
    2. Law of Sines.
    3. Law of Cosines.
    4. Area of a Triangle.
D. Polar Coordinates.
    1. Polar Coordinates.
    2. The Complex Plane; DeMoivre's Theorem.
    3. Vectors

IX. Methods of instruction:

The chief method of instruction is the lecture method along with class discussion of the subject matter.

X. Brief overview of special instructions:

Students may seek tutorial assistance in the Tutorial Center..

XI. Bibliography of supplemental references and/or source materials:

MyMathLab resources available via Internet; SmartThinking Tutoring available via Internet

ADS (Americans with Disabilities Act) Statement

Any student who is a "qualified individual with a disability" as defined by Section 504 of the Rehabilitation Act and Title II of the ADA, and who will need accommodated services (e.g., note takers, extended test time, audiotape, tutorials, etc.) for this course must register and request services through the Office of Academic Assistance Programs, S-150.

CSD CODE OF STUDENT CONDUCT

LSUE enforces discipline on campus to protect the academic environment of the campus and the health and safety of all members of the University community. To accomplish this objective, the University enforces standards of conduct for its students. Students who violate these standards can be denied membership in the LSUE community through imposition of disciplinary sanctions.

The LSUE Code of Student Conduct can be found on the LSUE website (lsue.edu). Follow the "Current Students" link from the homepage, and then click on "Student Handbook."

MATH 1022 OUTLINE
8/10

7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8

8.1, 8.2, 8.3, 8.4, 8.5, 8.7, 8.8

9.1, 9.2, 9.3, 9.4

10.1, 10.3, 10.4